

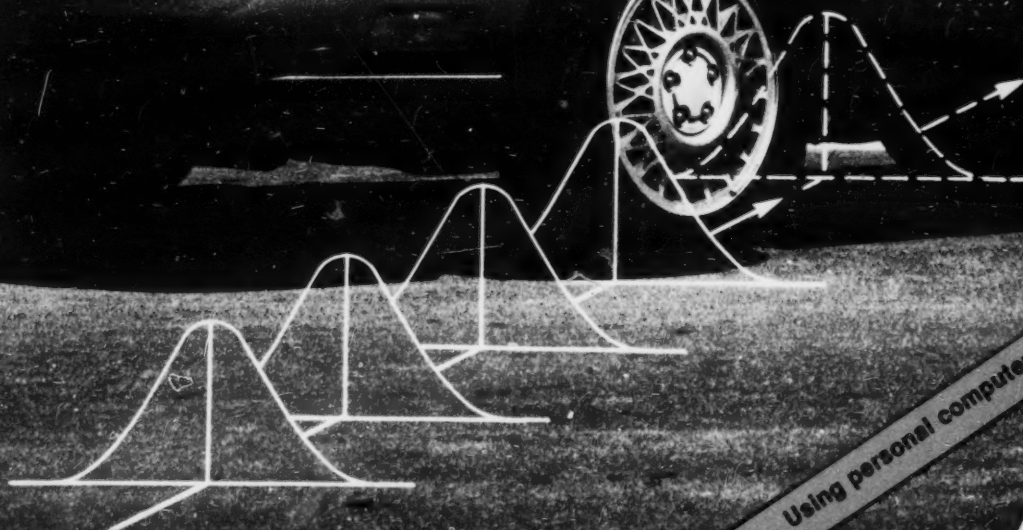
PurchasingWorld

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**Job 1 is being
done with
statistical control**

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Using personal computers

PurchasingWorld[®]

Vol. 29 No. 9-September 1985

Helping you manage
the business of buying

Features

34 Job 1 is being done with statistical control methods

Quality doesn't just happen. Really it is a systematic—and statistical—approach to preventing non-conforming product or service from happening. That philosophy has taken hold at Ford Motor Company which has invited its suppliers to join in Ford's "never-ending improvement" in the quality of its products and the productivity of its manufacturing operations through the use of statistical process control methods.

43 PW Office '85

Change the keyboard on your basic typewriter? Well, if the U.S. government, the Army, and a bunch of others who are studying the Dvorak method of placing all the frequently used vowels and consonants on the home row adopt it, it could happen. No, it's not a new idea, but you'll find a lot of other ones on this month's office page.

46 Justifying the PC buy

What a great idea. Using personal computers in purchasing. It's an idea whose time is long overdue. Speaking of timely, here's a new series on the very subject by purchasing pro Jeff Pinkerton, who is director of corporate purchasing at American Standard Inc., New York. Next month's installment of Pinkerton on PCs will tell you how to set your PC up.

58 Putting 'risk of loss' right

According to Dr. John E. Murray Jr. the characterization of a contract for the sale of goods as either a "shipment" or as a "destination" contract can make a great deal of difference in determining who has liability in the event of loss.

66 EDI update

Eastman Kodak recently invited 50 of its largest vendors in to learn about how the firm is going to use electronic data interchange (EDI) to replace paper in purchasing transactions. As you might guess, there was 100% attendance.

Cover photo: That's Ford's new Taurus on our cover. Ford asked for and got greater supplier involvement in design of parts. It is also asking suppliers for and getting better quality and productivity through the use of statistical process controls.



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83

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No crisis in prices

The upcoming fourth quarter is looking as though it will follow the same pattern as the last few months: scattered price boosting attempts with many of them failing to hold as buyers continue to call the shots.

Trends seem to confirm this. For example, almost one out of five (19% to be exact) of the purchasing managers surveyed by NAPM's Business Committee reported lower prices last month—almost double the 10% who reported increases. This marks the eighth consecutive month that lower prices have predominated. Reductions have been noted over the last 30 days in such key product lines as aluminum, copper, hot rolled steel sheets, fuel oil, coal, gasoline, and corrugated shipping containers.



The reasons behind all this easiness remain basically the same: (1) more-than-ample capacity, with the nation's factories operating at about 80%—well under preferred levels; (2) weak demand in most areas as real GNP advances fall under previously projected levels; (3) surprisingly modest cost pressures; and (4) continued strong competition.

Also, there doesn't seem to be anything to fear from continuing dollar softness. Most foreign firms only partially passed along the savings stemming from the 1984-85 dollar runup, thereby giving them ample room to absorb current and future currency softness. Point to keep in mind: Recent studies suggest the dollar would have to fall another 15-20% to cause any appreciable acceleration in the overall price level.

Also, on an optimistic note, cost pressures are likely to remain subdued. For example, energy tabs are being held in check by shaky oil. The same is true of the cost of money as the prime rate continues to hold under 10%.

Wage rate gains have also continued to hold in the relatively moderate range—current figures are running only about 4-5% above a year ago.

Perhaps the most encouraging sign of all is the revised price forecast by the Federal Reserve Board—an agency that has in the past seen inflationary demons lurking everywhere. Despite nearly three years of uninterrupted business gains, the nation's money managers feel that overall prices (as measured by the GNP deflator) will rise at only a 3.75-4.75% rate through the end of 1985.

But there could be some problems over the long pull. For one, productivity gains are now not nearly as robust as they were last year. And even with continuing low pay increases, this could mean a 1-2% acceleration in unit labor costs over the next 12 months or so.

A growing profit squeeze in some product lines could also cause some uptick in the overall inflation rate over the long term. This would certainly seem to be the case in such severely depressed areas as steel and nonferrous metals. Declines here have generally been in the double-digit range over the last few years, suggesting that boosts in these sectors are likely to be fairly substantial when supply and demand factors come into better balance (as they ultimately must).

Robotic markets

Figure on prices of industrial robot systems falling about 3.1% a year over the 1985-90 period.

This new projection, made by Henderson Ventures, suggests that the average tab for a system (the basic mechanical unit, controller, software, and accessories) will run about \$50,700 by 1990, down about \$8,400 under current levels.

The California-based electronics consulting firm sees this as a result of several conflicting price trends:

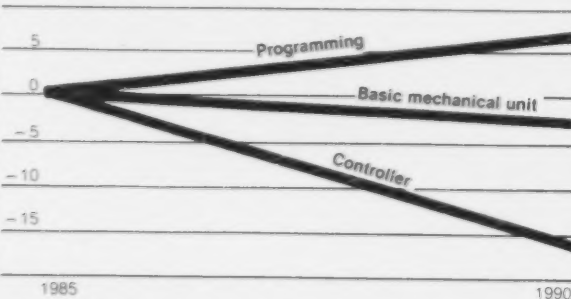
- The portion of the price represented by the basic unit is expected to decrease by about the same percentage as the overall system, primarily because it is the most costly part, accounting for over 60% of the total outlay.
- The price of the microprocessor-based controller (including RAM, input devices, communications, and secondary storage) should fall at an average annual rate of 16%.
- The price of robotics programming languages should increase more than 7% a year as greater functionality is introduced, such as knowledge representation and inference mechanisms.

The new study also estimates world sales (in current dollars) will rise about 25% annually—from \$1.6 billion currently to near \$5 billion by 1990.

U.S. production, viewed separately, should grow at a somewhat faster 28% rate. But the Japanese are still expected to command 56% of the world market by 1990.

Industrial robotic systems

(Average annual price change, 1985-90)



Source: Henderson Ventures

PW PREDICTS

Plastic resins

CURRENT SITUATION: Prices are moving up from recent lows. Not all of the posted hikes are sticking, but enough have to boost average tags about 2.5% since March. Behind the modest pickup: a combination of rising feedstock costs (in benzene, styrene, and vinyl chloride) and slowly improving demand. **Year-to-date domestic sales are running 3-4% ahead of last year. Exports have also picked up lately—especially in polyethylene and polypropylene—aided by a tighter European supply situation.**

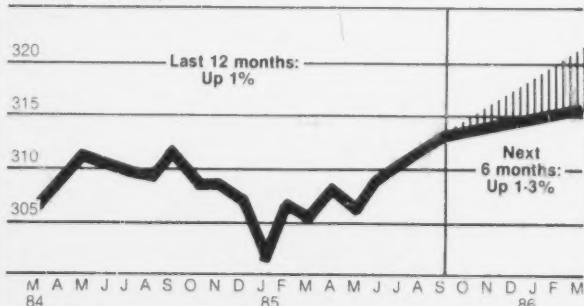
DEMAND: The recent pickup could accelerate a bit—with the total thermoplastic advance for 1985 as a whole now put near 6%. But there could be some significant plastic-by-plastic differentials—with these individual changes (*vis-a-vis* 1984) anticipated: LDPE (+8%), HDPE (+9%), PP (+10%), PS (+7%), PVC (-3%), and ABS (-2%). A preliminary forecast for 1986 suggests more even performance, with all resins moving up in the 3-5% range.

SUPPLY: No problems anywhere. True, two of the resins (HDPE and PP) are now operating in the 90%+ range. But producers in both these areas are having trouble boosting prices. The markets are even easier in PVC, PS, and ABS where operating rates remain in the low 70-80% range. Next year, however, could see some modest tightening, as 3-5% increases in overall demand are only partially offset by a 1% boost in capacity.

PRICE OUTLOOK: Slowly improving supply/demand balance suggests a rise in most resins. But advances will be modest and gradual, held down by still-ample capacity, a possible weakening in feedstock costs if crude oil continues to fall, and improved technologies (especially in PE). Overall, budget for about a 1-3% increase by early 1986—enough to boost the transaction price on most of these resins by about 1-2¢/lb.

Plastic resin prices

(Index: 1967 = 100)



Textiles

Markets may be ready to bottom out. Denim has moved up 25¢/yard from spring levels (to \$2.75-2.80/square yard on the 14.5 oz heavyweight 60 in. grade)—with another 5% boost possible by year-end. Other signs of strength would have to include (1) a pickup in interest in heavyweight apparel grey goods and (2) some modest gains in purchases of polyester/cotton print cloths and industrial grey goods.

Semiconductors

High OEM inventories, especially in the communications, office, and computer equipment sectors continue to put downward pressure on demand and prices. On the latter score, buyers believe that quotes will edge still lower. As for demand, continuing low book-to-bill ratios (around 0.7) tell the story. These negative readings have completely exhausted backlogs of semiconductor manufacturers, forcing downward revisions in sales estimates. The Semiconductor Industry Association predicts that U.S. billings will decline more than 20% this year.

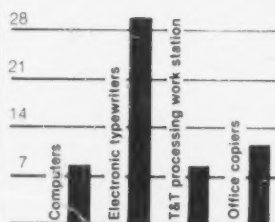
Office equipment

Demand for computers, typewriters, and office copiers will outpace overall economic growth by a wide margin, according to the Computer and Busi-

ness Equipment Manufacturers Association (CBEMA). This year, computer and related equipment sales are expected to rise 8%; office copiers should be up by an even larger 10%; electronic typewriters should advance a hefty 30%. The latter, of course, is aided by phasing out of electric typewriters. Sales of text processing workstations (units with memories of 20K or more) will also show a big 8% advance.

Office Equipment

(% increase in demand 85/84)



Computers

Don't be surprised if Apple IIc models (now priced at \$1,295) fall to well under \$1,000. More expensive PCs are also facing additional competition as more manufacturers unveil IBM-compatible desktop machines. Thus (1) Wang has introduced a new Advanced Professional model that's faster than IBM's PC AT, yet sells for \$500 less and (2) Data General's new Dash-er/One workstation has a base price of only \$2,100 when used as a PC. And going further up the computer ladder, both faster and cheaper supermini-computers are coming on-stream—types that pro-

PW PREDICTS

Energy

CURRENT SITUATION: Another relatively inflation-free year seems all but assured. The overall trend this past year has actually been down, with oil leading the way. At latest report refined petroleum product prices were off some 4% from year-ago levels. Natural gas (down 2%) and coal (up 0.5%) have also behaved well. Electricity has been moving up, but by only 3% in the last 12 months.

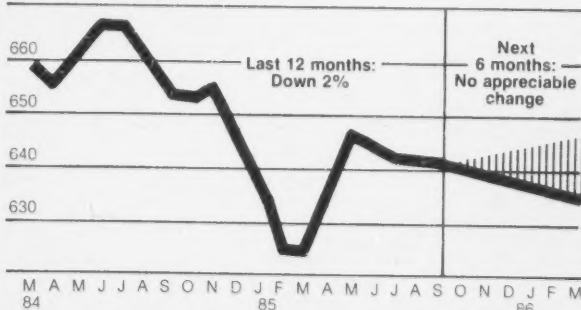
DEMAND: Overall energy consumption this year should be only about 2% over last year—slightly under the comparable GNP advance. Behind the declining energy/GNP ratio: (1) continuation of the conservation trend started during in the early 1970s, (2) improving technology, and (3) a changing product manufacturing mix that require less energy. **The demand decline is most apparent for oil** where 1985 domestic use is expected to rise only about 0.5%. Coal is expected to rise by only 2%. **The only big increase is seen in nuclear energy where a 10% gain is expected.** Demand for electricity is expected to be up only about 3%.

SUPPLY: There is more than enough of everything to go around. This is especially true of oil where cheating on quotas by OPEC producers, plus the still-rising, non-OPEC output has made for a king-sized glut. A similar market imbalance is also evident in natural gas and coal. **Electricity seems more than ample. Even a DOE spokesman sees the surplus lasting for another 5-10 years.**

PRICE OUTLOOK: Expect little or no long term change in overall averages as boosts in electricity rates (2-3% at annual rate) are offset by easiness in other areas. And another \$1-2/bbl crude oil drop can't be ruled out as OPEC's power continues to wane.

Fuel and power prices

(Index: 1967 = 100)



vide much of the computer power of super computers at a far lower cost.

Propylene

Prices are under pressure. Reason: Supplies are beginning to mount, reflecting the easing of refinery grade material for octane enhancement. Shop around and big orders can be nailed down for as little as 14.25-14.50¢/lb for the chemical grade—about 1¢/lb under levels prevailing as recently as early May. Polymer grade material isn't all that firm either. The current 16.25-16.50¢/lb quote runs well under the 18¢/lb prevailing during the early part of the year.

Maleic anhydride

Markets are quite bullish reflecting (1) strong demand which is expected to run about 4-5% above 1984 levels and (2) operating rates in the 90% range. True, some discounting still exists, but it has been lessening in recent weeks. Another sign of firmness: the new 3¢/lb increase in list prices, bringing quotes to 53¢/lb for molten materials and 65¢/lb for briquettes.

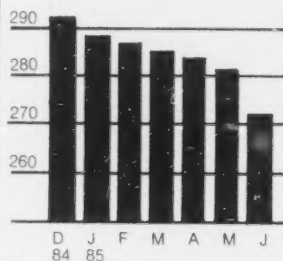
Paper and board

Prices remain weak. True, one firm is trying for a \$320/ton linerboard quote. But it is doubtful whether such a boost over the recent low \$265/ton price will hold. In any event, corrugated box

prices remain under pressure. Coated papers, too, seem about to peak—and a newsprint increase, originally scheduled for April 1, looks all but dead for the rest of the year. On a more bullish note, the combination of reduced imports and a drop in customer inventories are lending some firmness to previously soft uncoated white papers—as about half of a recently posted \$60/ton increase sticks.

Paperboard prices

(Index: 1967 = 100)



Chlor-alkalis

The recent \$10/ton increase in chlorine has failed to hold—with market prices still quoted at pre-hike \$110-125/ton levels. Behind the softness: falling PVC demand plus the fact that some of the small and medium-sized producers continued to sell at the old price. Caustic soda has also been soft, reflecting reduced pulp and paper demand. Prices of the alkali are now said to be in the \$105-115/ton range, some \$5-10/ton under recent levels. Imports have been hurting caustic, too. Another sign of overall easiness: projected 1985

PW PREDICTS

Pollution control spending

Be prepared to shell out lots of cash for pollution control equipment.

All told, 1985 outlays could reach \$10.5 billion—only fractionally less than last year and the equivalent of about 2.7% of the year's total plant and equipment spending bill. In some industries, the percentage of capital investment earmarked for cleaning up the country runs upwards of 5%.

The continued big spending estimates come as a bit of a surprise in view of Washington's opposition to new environmental legislation.

Here's a more detailed rundown of what seems to be shaping up in this key sector, according to a new McGraw-Hill survey of over 400 leading U.S. firms:

- Biggest 1985 spenders will again be public utilities (\$2.2 billion), petroleum (\$1.8 billion), mining (\$1.2 billion), and chemicals (\$1.0 billion). Together, these account for nearly 60% of total spending.

- In terms of percentage gains over last year, the leaders are automotive (87%), stone, clay, and glass (64%), chemicals (28%), petroleum (27%), nonelectric machinery (23%), instruments (22%), and steel (20%).

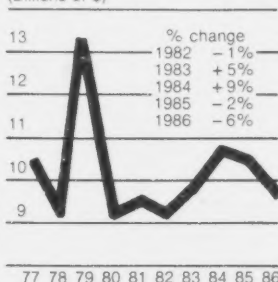
- Industries with the biggest portion of their capital spending bills going for pollution gear include mining (10.3%), chemicals (6.8%), and electric utilities (5.5%).

- An increasingly large portion of the pollution fighting dollar will go to solid waste (20% this year and 23% next year, vs only 18% last year). But air (45%) and water (34%) will still command the biggest shares this year.

One long-term change noted by the survey: While dollar totals remain high, the percentage of the capital spending dollars earmarked for this function has been declining. The current 2.7% share is less than half of 1976 figure of 5.6%.

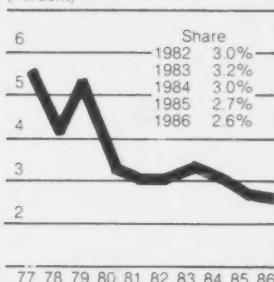
Pollution control spending levels off

Overall outlays
(Billions of \$)



Source: McGraw-Hill

Share of capital spending
(Percent)



advances of just 2% for caustic and an even smaller 1% for chlorine.

Ethylene

The recent 1-2¢/lb increase has washed out with prices remaining in the bargain basement 14.75-15¢/lb range. Behind the softness: relatively high consumer inventories and easing feedstock costs. On the latter score, ethane has been dropping and is now available at 21-21.5¢/gal. Also gas, oil, and naphtha (heavy feedstocks which still account for substantial amounts of ethylene) have been affected by recent declines in crude oil. Demand has been firm, but even here, seasonal easing would seem to rule out any further near-term price boosts.

Packaging

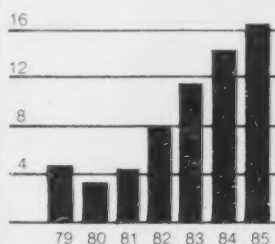
Here's how the NAPM Packaging and Containers Committee views the near-term outlook: Cans—excess capacity with a flexible pricing environment. Glass—firm prices with buyers noting a “sellers” market. Metal drums—soft prices. Folding cartons—shorter leadtimes, weak prices, and significant decrease in SBS tags. Corrugated—most linerboard prices below the \$320/ton list. Bags—weak quotes due to a soft kraft paper market. Fiber cans—oil market losing out to plastics, although these can manufacturers are aggressively defending their turf.

Office space

It might pay to shop around before committing—as vacancy rates continue to climb. Latest 16.1% reading for downtown areas, for example, is more than two percentage points above 1984 averages. And latest levels are more than four times larger than in 1980. Suburban vacancies are even higher (currently averaging 19.7%). Cities with substantially higher than average downtown rates: Oklahoma City (25.8%), San Diego (25.4%), San Antonio (23.6%), Denver (23.6%), Miami (22.7%), New Orleans (22.6%), Phoenix (22%), and Houston (20.2%).

Office vacancy rates

(Percent)



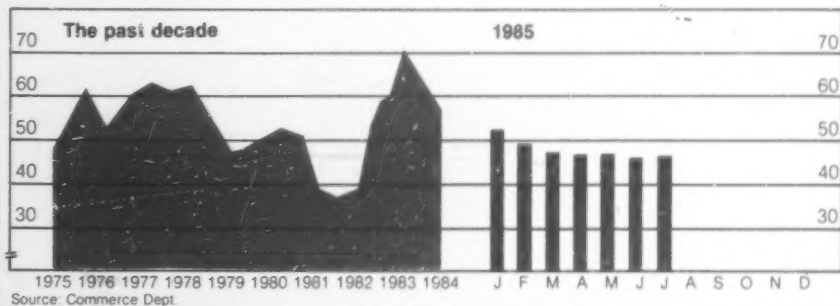
Source: Coldwell Banker

PW Office '85 is alive with the news you need in office equipment technology.

BUSINESS DATATRAK

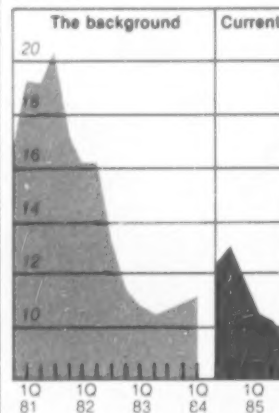
NAPM business barometer

Based on five indicators (employment, inventories, new orders, production, vendor performance)

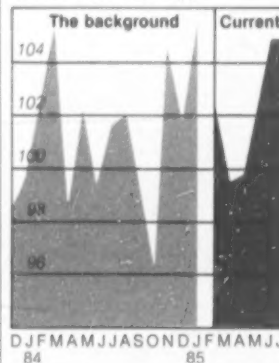


Leading indicators

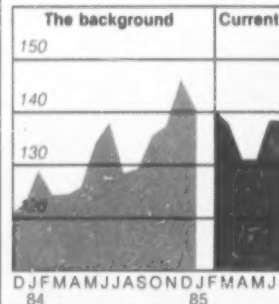
1. Prime interest rate (Percent)



2. Durable goods orders (Billions of \$, seas. adj.)



3. Help wanted (Index: 1967 = 100)



KEY ECONOMIC TRENDS

Is there life after the first half?

The economy isn't taking off, but there are enough positive business indicators to suggest about a 3-4% annual rate of real GNP advance for the rest of the year.

One good sign: Industrial production, which has been moving irregularly sideways for more than a year, seems headed back into the plus column, with about a 2% annual rate of advance seen.

This forecast is based on several factors. For one, the inventory paring of the last few quarters finally seems to have run its course. The number of purchasing managers who expect to increase their holdings now outpolls those planning cutbacks.

This can't be underestimated. Other things being equal, a level-to-rising inventories trend means that any increase in final

demand will be quickly translated into new production.

Then, too, there is the Fed's continuing relatively easy money policy making money easier and less expensive to borrow. This has to have a positive effect.

Note, for example, that the prime interest rate has dropped down into the single-digit range, falling some 3.5% under year-ago levels (see chart). And while the rates are not expected to fall much more, the current levels are certainly low enough to spark some pickup in both consumer and business buying.

These lower rates are already having an effect in the construction sector where slowly falling mortgage rates now point to about 1.9 million housing starts this year—up from last year's 1.8 million. Also of note: Nonresidential building has been very strong—with contract awards in this area rising at a 17% annual rate in the second quarter 1985.

But construction is not

the only sector now solidly in the plus column. Defense spending continues to rise. And consumer outlays are also looking up, judging from the high level of family buying plans. A recent Conference Board survey, for example, shows 7.5% of the respondents thinking about buying a new auto and 28% a major appliance.

Businessmen also seem fairly confident. While this may not be enough to keep capital spending in a continued uptrend posture, it should at least keep these outlays on a relatively high plateau.

Put all the above pluses into the hopper and it's not all that surprising that durable goods orders have been rebounding from their early 1985 lows. While the figures don't indicate a boom, they do suggest at least a modest gain in factory output.

The employment picture also looks relatively good. The jobless rate remained unchanged in the 7%+ range, but there are some indications that

BUSINESS DATATRAK

some modest improvement may be in offing.

The number of workers on nonfarm payrolls jumped 243,000 in July (seasonally adjusted)—significantly more than the second quarter's average of 180,000 gain. And help wanted advertising (a leading indicator of management's demand for labor) has moved up again in recent months.

This improving picture has also resulted in fewer gloom and doom predictions. In sharp contrast to a few months back, the majority of analysts and virtually all econometric models are now calling for continued growth in 1986—with average GNP advance put in the 2-3% range.

There's glee behind the gloom

Business leaders are still basically optimistic despite first half results which fell significantly under projected levels.

A new Dun & Bradstreet survey of 1,400 key executives, for example, shows that 74% expect

third quarter sales to top year-earlier levels (see chart) which is not that much different from the 75% figure noted three months earlier.

The sales outlook is perhaps best summed up by D & B's sales optimism index (the percentage of firms expecting increases minus the percentage expecting declines). This yardstick is currently put at 68—a bit under 1984 peaks but still far above the 40 reading noted during the 1982 recession.

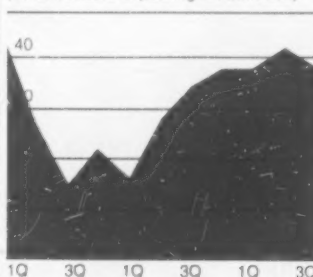
Other encouraging findings of the new survey:

■ **New orders:** The figures here are still quite impressive, with some 69% of the responding companies anticipating year-to-year gains during the current quarter—far outweighing the 5% who expect some decline.

■ **Inventories:** Expectations for increases are down somewhat, indicating that business leaders are continuing to keep a tight rein on stocks despite their still optimistic sales projections. Specifically, only 39% now expect increases *vis-a-vis* a year ago, compared to 41% who felt that way three

Accounts payable: A status report

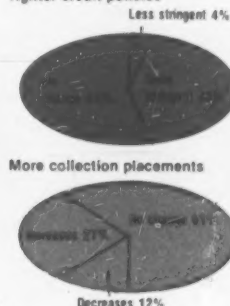
Days supply outstanding is on the rise
(% of vendors expecting an increase)



Source: National Association of Credit Management

But vendors plan to fight back via...

Tighter credit policies



months ago. Also, the number of firms planning cuts has increased from 12% three months ago to 16% currently.

■ **Prices:** The percentage of respondents looking for higher prices has fallen, with only about one in three putting third quarter levels above a year ago (vs. 41% three months ago). Some 60% say they see no change and 4% actually expect third quarter prices to drop under last year's level.

Not surprising, some 13% of these vendors now label the payment problems as "serious"—with another 52% dubbing it "moderate." One out of every three respondents also noted that unauthorized discounts, deductions, and chargebacks are now either a serious or moderate problem.

But these same sellers are also beginning to do something to reverse these trends: Some 43% plan more stringent credit policies (outweighing the 4% who may ease up), and 27% are now contemplating an increase in the accounts they place for collection (vs. only 12% who see some decrease).

There could also be more use of service and interest charges on past-due accounts. Some 15% of queried vendors expect an increase in this approach (vs. only 10% who may cut back on this play).

Another study—by TRW—confirms the substantial number of past-due accounts. At latest report, 22.4% of all accounts monitored by TRW were past due, with 9.4% more than 31 days in arrears.

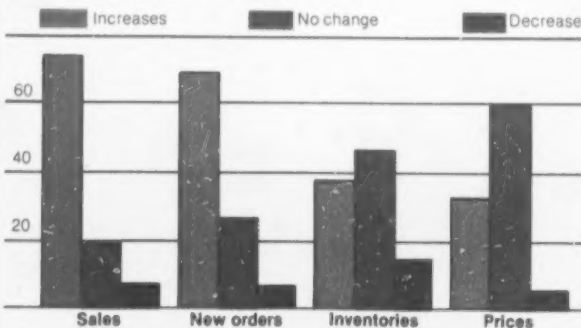
The check's in the mail

Thinking about paying your procurement bills more slowly? If so, you've got plenty of company, according to a new report just issued by the National Association of Credit Management (NACM).

Latest findings show that 37% of queried vendors now expect an increase in days sales outstanding over the next six months. While this is a bit under the 41% reading noted three months ago (see chart), the percentage is still far above 1983-84 readings.

Businessmen remain bullish

(3rd qtr. '85 vs 3rd qtr. '84, % of respondents)



Source: Dun and Bradstreet

BUSINESS DATATRAK

CURRENT PRICES

Can there be still another month with no price movement?

Add still another month to the steady stream of near-zero movements in overall industrial prices. Latest levels are virtually unchanged from year-ago readings.

Credit the latest month's level reading to a combination of offsetting shifts. On the downside, for example, was a continuing across-the-board drop in energy tabs—with slippages noted for gasoline, home heating oil, natural gas, finished lubricants, kerosene, jet fuel, diesel fuel, and even electric power.

All told, this slide added up to nearly a 1% decline in fuel and power costs for the month—enough to

This month's breakdown

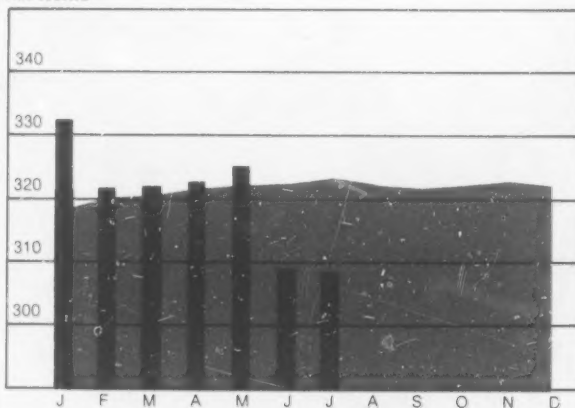
	Latest level (July)	% change from: Month ago	Year ago
Bearings	353.5	-0.1	3.0
Bolts, nuts, etc	278.0	0.5	0.0
Chemicals, inorganic	303.0	1.3	3.6
Chemicals, organic	351.0	-0.7	-5.4
Concrete products	321.1	-0.1	3.4
Corrugated cartons	270.5	-2.1	1.4
Cutting tools, small	285.4	0.0	2.0
Electric lamps (bulbs)	344.1	0.0	3.9
Electronic components	197.5	-0.7	1.6
Fans and blowers	359.7	0.1	2.5
Foundry and forge products	363.5	0.2	-0.3
Fuel oil (residual)	300.2	0.7	-21.6
Furniture, commercial	308.6	0.5	3.5
Gasoline	588.4	-0.3	2.9
Glass, flat	222.8	0.7	-1.5
Glass containers	378.4	1.1	3.3
Gypsum products	338.6	0.1	-5.9
Hand tools	375.0	0.3	4.4
Hand tools, power driven	233.3	0.9	4.1
Industrial furnaces	385.1	0.1	2.8
Integrating and measuring instruments	231.6	-0.6	0.6
Internal combustion engines	347.2	-50.1	2.3
Lubricating oil	N.A.	N.A.	N.A.
Lumber millwork	314.5	0.5	2.3
Material handling equipment	295.4	0.2	2.0
Metal containers	358.1	0.0	2.9
Metal mill shapes (nonferrous)	307.4	-1.7	-4.8
Metal tanks	305.4	0.1	-0.3
Motors and generators	351.8	-0.1	3.3
Motor trucks	293.5	0.1	4.2
Office and store equipment	154.9	-0.1	0.8
Paperboard	273.2	-1.1	-2.1
Paper boxes and shipping containers	273.2	-0.2	-3.5
Paper office supplies	238.7	-0.5	-2.0
Paint	278.5	0.2	1.6
Plastic resins	308.0	-0.4	-0.8
Precision measuring tools	263.3	0.0	3.9
Pumps and compressors	356.4	0.1	1.8
Refractories	372.2	0.0	2.9
Rubber belts and belting	352.8	-0.8	0.8
Scales and balances	229.5	0.0	-0.6
Steel products	293.1	0.2	0.6
Switchgear	277.8	0.6	-0.4
Textiles, synthetic fibers	156.1	-0.3	-2.5
Textiles, gray fabrics	151.5	-0.1	-1.8
Tires and tubes	238.4	0.3	-2.1
Transformers and power regulators	231.1	-0.6	0.9
Welding equipment	291.7	-0.4	1.2
Wire and cable	204.0	0.6	1.2

Industrial prices

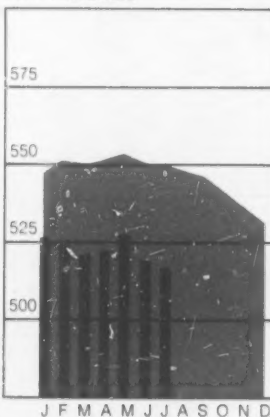
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1984 ■ 1985 ■

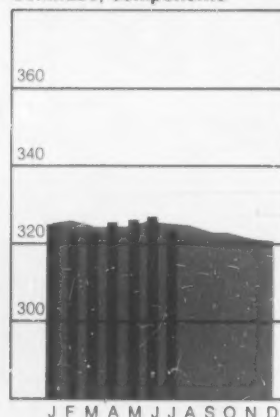
All Items



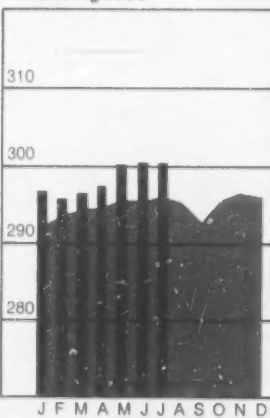
Raw materials



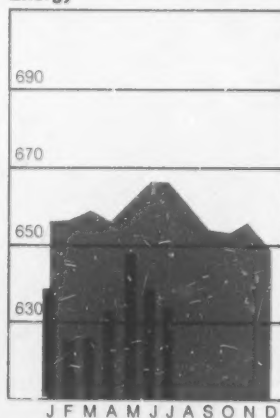
Semifabs, components



Finished goods



Energy

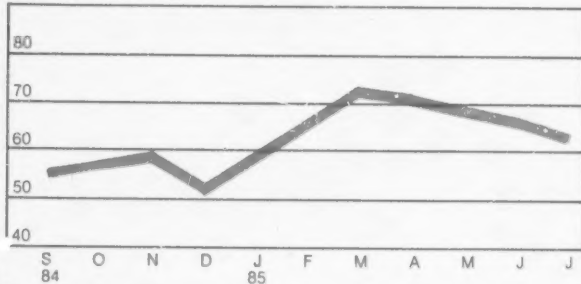


Source: Bureau of Labor Statistics

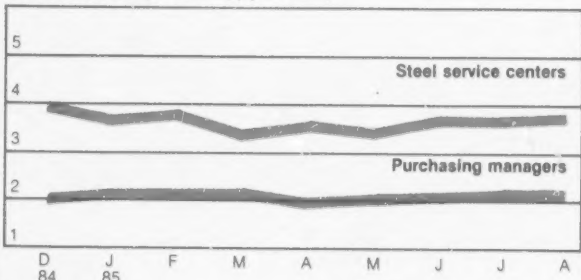
BUSINESS DATATRAK

Steel

Operating rates

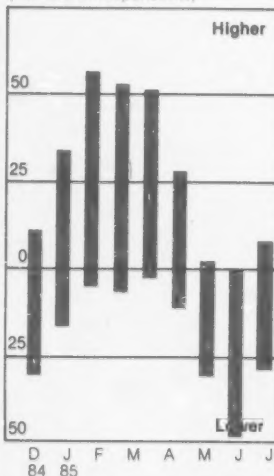


Inventories (months supply on hand)

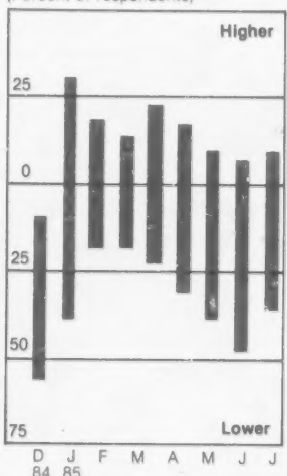


Demand

Service centers incoming orders (Percent of respondents)



Steel buyer purchase (Percent of respondents)



Import prices (compared to domestic)

Steel buyers

Above	10%
Same	24%
Slightly below	62%
Substantially below	4%

Service centers (carbon)

Above	0%
Same	16%
5-10% below	72%
10-20% below	12%
Over 20% below	0%

Source: Steel Service Center Institute, NAPM Steel Buyers Committee

drop overall energy averages a hefty 4.6% under year-earlier levels.

Basic materials continue fairly weak, too, with declines over the latest 30-day period noted in nonferrous metals, softwood lumber, industrial chemicals, paperboard, inedible fats and oils, paint materials, flat glass, and hides. These were more than enough to offset somewhat higher tags for plywood, wire and cable, wiring devices, tires and tubes, and ferrous scrap.

A similar tradeoff is also apparent in component parts—as drop-offs in electronic components, electric motors, and rubber belts and belting offset advances in glass containers, fasteners, and environmental controls.

Nor is the picture all that different in the machinery sector—as boosts in trucks, aircraft, commercial furniture, food machinery, and chemical equipment are pretty much balanced out by declines in transformers, railroad equipment, instruments, and oil and gas field machinery.

Perhaps the best indicator that things are still pretty much under control is the number of negative or “no change” readings in the detailed price table. Roughly one-half the items are now in the minus or neutral categories.

Point to keep in mind: You have to go back two decades or more to find so many vendors unable to post increases in what is still a basically upward-tilting economy.

STEEL SCENE

It's still a waiting game in nation's steel markets

Near-term steel markets still don't look all that robust. Granted, buyer and service center expectations for the next three months aren't quite as bleak as they were in early summer.

But the picture is still rather bearish. In the latest NAPM steel survey, some 35% of the PMs responding say they continue to plan on reduced purchases—far outweighing the 10% who feel some increase may be in order. And distributors responding to the latest Steel Service Center Institute Survey tell much the same story; 28% anticipate near-term declines vs. only 8% who see sales gains ahead.

This survey could reflect what SSCI president, Andrew G. Sharkey, calls a “threefold apprehension” among members: 1) continuing concern about imports of steel-using manufactured goods; 2) lack of strength in the heavy industry sector; and 3) doubts about whether or not business will bounce back after the traditional summer slowdown.

Nevertheless, Sharkey remains basically optimistic, noting that if the trends of the first half continue, 1985 shipments should surpass last year's record of 21 million tons.

Steel markets, meantime, continue to show

BUSINESS DATATRAK

signs of uncertainty and some underlying softness. Big-volume buyers, for example, are getting an additional \$15-25/ton discount on fourth quarter flat-rolled products.

Even the mills are cautious about fourth quarter shipment levels. Right now, for instance, the betting is that only about 19-19.5 million tons will clear the market over the last three months of the year.

One of the factors behind the lackluster demand outlook—aside from consumption—is the desire to reduce inventories. So far this year, users have pared about 500,000 tons from their stocks and are still not satisfied.

Service centers are equally cautious about inventories. In this case, an even bigger two-thirds of the respondents feel their stocks are too high and are planning further cutbacks.

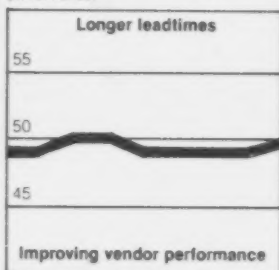
Another factor both groups agree on: There are still import bargains to be had, despite more than six months of quotas. Two out of three buyers say they can get imported steel under comparable domestic levels.

Perhaps the best indication of this import competition is the failure of incoming shipments to drop as much as had been predicted earlier when quotas were first imposed. Right now, for example, as much as five million tons could come in during the last quarter—enough to push the year's total to nearly 23 million tons, about 23.5% of the domestic market.

Monthly procurement status report

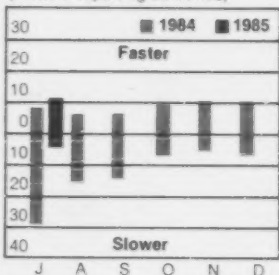
Leadtime index

A "diffusion" index based on 158 key commodities. Above "50" indicates a tendency for leadtimes to stretch out. Below "50" suggests improving vendor performance.

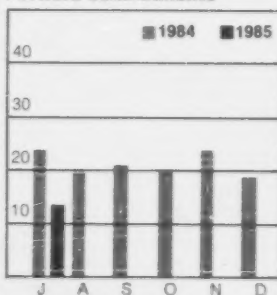


Delivery performance

(Percent reporting deliveries)

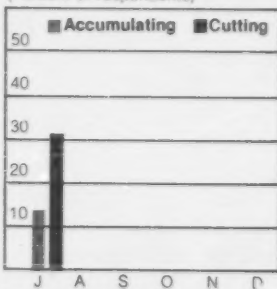


Forward commitments



Inventory strategy

(Percent of respondents)



Source: NAPM

PROCUREMENT STATUS

The lazy, hazy days of summer aren't helping

Not even the ending of summer—normally a time for a seasonal increase in activity—seems to be making much difference in overall procurement climate.

True, there are scattered changes in leadtimes. But they are mostly balancing each other out—keeping *PW*'s exclusive leadtime index squarely in the neutral "50" zone.

Also reassuring: the fact that the vast majority of the more than 150 product lines monitored by *PW* each month have remained virtually unchanged. As one PM succinctly put it, "demand just isn't strong enough to push things out."

Confirmation of this "no sweat" situation also comes from NAPM's ven-

dor performance series where only 4% have reported slower deliveries over the last month. That's the lowest such reading since the recession days of late 1982.

The absence of significant forward commitments is yet another indication that everything is pretty much under control. Last month, for example, only 14% were ordering production materials 90 days or more in advance—down significantly from the 18% figures of the previous two months.

This lack of forward ordering is also resulting in further inventory declines. The 32% of NAPM Business Survey Committee members who reported declines last month was more than twice the 13% noting additions.

If there is any doubt about today's all-out buyers' market, last month was the sixth consecutive monthly period in which no items were reported in short supply.

Leadtimes and availability

Chicago: Trend is toward shorter delays with these weekly leads: Coated and offset paper (1-2), chrome chemicals (1-2), special copper sheet (1), special brass and copper tube (8-10), softwood framing (1), and plyform (2-3). No change in c-r steel or aluminum sheet.

Cleveland: Status quo here—most alloying materials, natural kraft paper, plywood, plastic shrink film and strapping are on demand. Other weekly leads: Cold finish aluminum (10-12), PVC (3-4), corrugated and folding boxes (2-3).

Los Angeles: Modest stretchouts have caused higher waits: grey iron castings (8-10), brass castings (6-8), pumps (12-14), custom storage tanks (12-14), and standard bearings (20-24). Little change in fasteners or standard valves.

Houston: Summer doldrums have kept most leads where they were last month: Corrugated cartons (2), large transformers (17-26), motor control centers (13-26), component parts (1-8), plastic resins (2-3), and stainless fasteners (8-10).

Philadelphia: Waits for electronic components are still shrinking: double layer PC boards (6-8), and multi-layer PC boards (8-10). Also down are special fractional electric motors (to 10-12). General usage motors and standard bearings and fasteners are unchanged.

Pittsburgh: Little change here: plastic bags (3-4), corrugated and folding boxes (3-4), drums (1), laminating papers (6-9), lumber (3-4), steel strapping (2-3), alloying materials (2) paint (4-5), and ton orders of tin (8).

...continued on page 60

Nonferrous markets confound the experts

Robert S. Reichard, executive editor;
and Thomas F. Dillon, C.P.M.,
senior editor

Even the two-and-a-half year old business recovery hasn't been able to dampen one of the longest buyers' markets in the history of nonferrous metals.

This year, for example, overall prices will probably average no higher than they did in the depths of the 1982 recession.

But next year could see some modest recovery. *PW* equations, for example, suggest an overall 5% increase. But that's peanuts compared to the declines of recent years. Point to keep in mind: Even if this projected recovery does materialize, prices in 1986 would still be some 9% under 1980 peaks.

More important, the softness has been across-the-board. Buyers are still calling the signals in aluminum, copper, lead, zinc, and a host of minor metals. Precious metals, too, have been taking their lumps.

Why all this weakness? The answer is not hard to find. There have been a number of different fac-

tors behind continuing soft markets:

■ **A world metal capacity glut:** Production potential exceeds demand in almost every important nonferrous sector. Complicating the picture has been Third World countries' need for foreign exchange—a situation that has precipitated all-out metal production even in the face of over-supplied markets.

■ **A shift in production mixes:** Even though GNP/GDP continues to advance here and abroad, the types of products being turned out generally require less metal per unit than in the past. Thus, capital equipment, a big consumer of these metals, has not been nearly as strong as some of the high-tech industries which generally require a different mix of basic raw materials.

■ **Downsizing and substitution:** Also limiting demand has been the trend toward smaller end-use products (cars, for example) and the switch to plastics and other competing materials.

■ **The still-strong dollar:** Even though it is down from previous highs, it still remains at high levels compared to other currencies. It is certainly high enough to attract a flood of cheap foreign metal with low quotes.

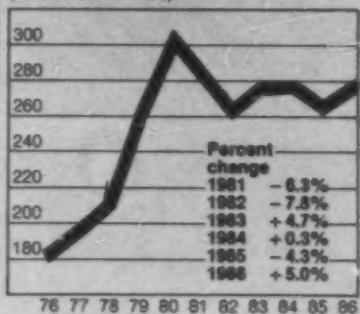
All these factors have exacted their toll. Lest there be any doubt on this score, take a look at the detailed "now vs. a year ago" price chart. Few, if any, metals are in the plus column, and some of the declines are eye-openers, with tags on several metals now running upwards of 20% under year-ago levels.

Go back further and many of today's differentials are even bigger. Here are some of the declines (now vs. earlier peaks): copper (42%), aluminum (36%), lead (68%), nickel (26%), and tin (28%).

Where do we go from here? While it would be unrealistic to expect further erosion (many mines and smelt-

Nonferrous prices: the big picture

(Index: 1967 = 100)



Source: Bureau of Labor Statistics, *PW* estimates

ers are now operating in the red), it's hard to project any sustained rally.

Even *PW*'s predicted 5% increase in 1986 may be a little bullish. Wharton Econometrics is calling for only a 3.5% advance in 1986 and only about 4% in 1987.

Copper and aluminum

There haven't been too many better years for buyers of aluminum and copper. Not only are prices way down, but vendors are falling all over themselves in an effort to move their stocks of basic metals and fabricated products.

The numbers tell it all. Aluminum ingot now goes for under 50¢/lb—way down from the 75¢/lb quote which prevailed as recently as April 1984. And today's upper 60¢ copper quote represents about a 20% drop from the 83¢/lb level of May 1983.

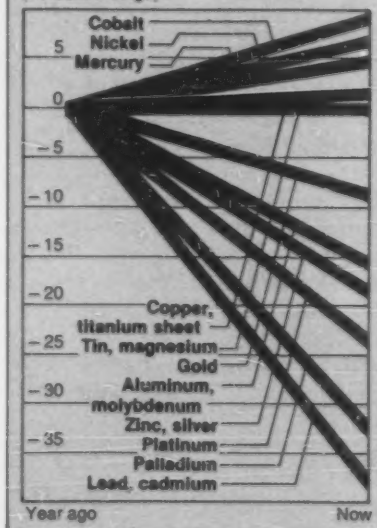
In both cases, cheap imports have been a major force behind the price easiness. And it's not just in the basic metal sector. There has been a big import surge in aluminum rigid container sheet (the Japanese now hold 10% of the market). And even more significant from an overall viewpoint, the U.S. has now become a net importer of fabricated products.

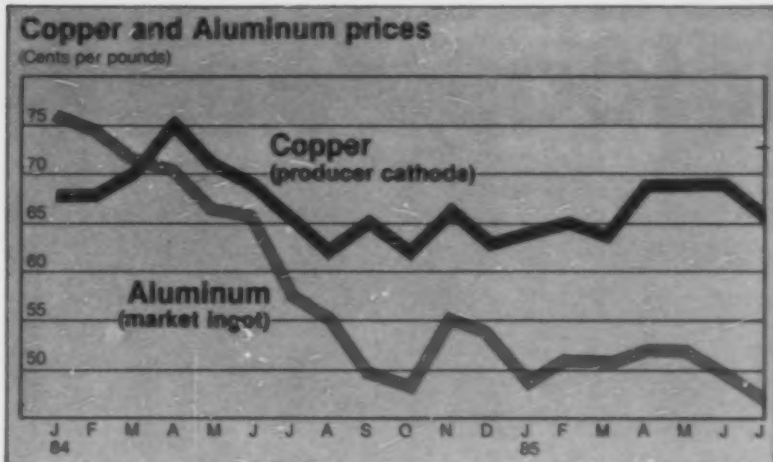
The picture is much the same in copper where overseas producers of brass mill products are said to be offering material at least 20-30¢/lb cheaper than domestic vendors. This, in turn, has forced some domestic mills to sell 50-60¢/lb under base price levels.

But imports are really just the tip of the iceberg. The underlying cause of the softness has been just too

Nonferrous tags now vs a year ago

(Percent change)





much metal. Global supplies are still outrunning global consumption by a considerable margin.

The copper supply situation has been further exacerbated by the failure of producers in Africa and South America to cut production. Result: continuing oversupply, despite the fact that the U.S. copper industry has been cut back to near 60% of its potential.

Copper inventories are falling, however—especially on the exchange level *vis a vis* levels at the beginning of the year. But they will have to fall a lot more before they can translate into any meaningful upward pressure on prices.

High inventories are also a problem in aluminum—despite the fact that U.S. primary producers are operating at only 70-72% of rated capacity. Free World stocks have been put at near 2.4 million metric tons (actually up 250,000 tons from a year earlier). In any case, a drop to near two million would be needed to spark any sustained price rally.

Copper and aluminum demand, on the other hand, has been fairly brisk. This year, the aluminum industry should experience a 4% rise in shipments (to nearly 16 billion lb). Orders, up 8% so far this year, would certainly seem to back up this projection.

Similarly in copper, domestic use looks to be up about 2%—and maybe 3% for the Free World market.

The demand gains won't be enough to sustain any really big price increases. This is especially true in aluminum where more and

more buyers are pressing for tolling arrangements (the user supplies metal to a fabricator for processing) with domestic rolling mills—a move toward cost-based pricing to get the full benefit of low ingot prices.

All of this is not meant to imply that prices won't rise a bit as inventories slowly fall, consumption remains fairly strong, and cost pressures mount.

Titanium

Since 1979, U.S. producers have increased sponge metal production capacity from 23,500 tons to 35,500 tons. World capacity has increased from 82,000 tons to 131,000 tons. During this period the yearend price rose from \$3.98/lb in 1979, to \$7.65/lb in 1981, and then fell to \$5.55/lb in 1984.

Actual U.S. consumption rose from 23,937 tons in 1979 to 26,943 tons in 1980 to 31,599 tons in 1981. In 1983 consumption dropped to 16,072 tons, rising again, in 1984, to 24,000 tons.

Today the published price falls in the \$3.75 to \$4.00/lb range. Little upsurge in demand and more than adequate supply should hold the price fairly stable at this level for the foreseeable future.

Last year, about 60% of titanium metal was used in jet engines, airframes, and space missile applications. About 20% was used in chemical processing, power generation, and in marine and ordnance applications. The remaining 20% was used in steel and other alloys, according to the Bureau of Mines.

Lead

"There is simply more supply than demand and it looks like it will stay that way for quite a while," says Thomas A. Parker, metals purchasing manager, Exide Corp., Philadelphia.

Although the U.S. should have sufficient supplies of 99.99% lead, a sharp increase in battery demand could result in a shortage of the product overseas, which would in turn drive prices up in this country.

However, with supplies ample, prices are expected to remain stable for at least the next six months. Any increase will be limited to a cent or two per pound, bringing the price up to 21¢ or 22¢ per pound.

Zinc

Zinc will be plentiful. The industry's major problem today is overproduction. There are no dramatic new markets—certainly nothing like the switch from a copper to a zinc penny a few years ago, but there is some changeover occurring in the auto industry as more zinc is being used to protect metal from corrosion. This is also happening in other markets such as appliances.

Predictions for the next six months or so are that prices will stay firm—in the low to mid-40¢/lb range for Special High Grade zinc.

Nickel

After climbing from \$2.22/lb late in November 1984 to \$2.55/lb in June 1985, the price of nickel dropped to \$2.37/lb in July. The initial price runup was due to a drop in London Metal Exchange stocks which gave producers a chance to raise prices.

Supply and demand soon stabilized with several producers announcing expansion plans and putting capacity back on line.

Nickel's most important market is the production of stainless and alloy steel, accounting for 44% of its consumption. Some think the domestic demand for nickel will fall off this year because so much stainless steel is being imported. Predictions are for zero growth in nickel demand in the U.S. over the next 12 to 18 months and for a 3% increase in worldwide demand.

A 36-month contract recently negotiated by the United Steelworkers

of America and Canada's Inco Ltd. (the largest nickel supplier outside the communist bloc) will also help assure supply. The contract, covering 7,300 hourly workers, substitutes automatic wage boosts with special bonuses linked to the price of nickel.

Inco agreed to pay a 15¢/hr bonus when the average price rises above \$2.50/lb. If the price increases to \$2.90/lb, workers will get a top bonus of 35¢/hr.

Tin

For the past three or four years, there has been an oversupply of tin, in sharp contrast to the previous 10 years when demand exceeded supply and tin prices rose steadily.

Four years ago, a drop in demand, coupled with excess inventories by miners and smelters throughout the world, led to a steady decline from a peak of \$8.00/lb then to a range of \$5.00-\$5.50/lb now.

Demand bottomed out in 1983 and has been creeping up ever since. The U.S. Bureau of Mines estimates there is at least 70,000 tons of excess tin on the world market. To put that figure into perspective, the U.S. uses about 38,000 tons of primary tin annually. The world market is 150,000 to 180,000 tons yearly.

In addition to the tin being produced, the General Services Administration has been selling tin from the GSA stockpile almost continually for the past 25 to 30 years.

Expanded production in Brazil, Bolivia, and China will also exert additional downward pressure on tin prices. Canada is expected to be an important new supplier of tin, thus adding more pressure to depress prices.

Precious metals

The strong dollar, lower inflation, high interest rates, and technological changes resulting in less use of precious metals in electronics have taken some of the shine off the precious metals markets.

Palladium, for one, is being substituted for gold in electrical contacts through a process called "palladium flashed gold," which reduces costs and weight. One refiner notes that printed circuit boards not so long ago contained three times

as much precious metal as they do today.

Market prices for rhodium, another member of the platinum group, recently fell to below \$700/troy ounce. Earlier this year rhodium was selling for around \$1,200/troy ounce.

Silver prices have been declining since March 1984 when it was getting \$10.04/troy ounce. The average daily price was \$11.84 in 1983, \$8.25 in 1984, and \$6.00 to \$6.20/troy ounce now.

Gold, which peaked at \$850/troy ounce in January 1980, fell erratically until February of this year when it bottomed out at \$282. The price now is hovering in the \$300 to \$315/troy ounce range with no upturn expected as long as inflation remains under control and the dollar stays strong.

Manganese

Manganese supply should remain plentiful for the foreseeable future as demand continues to slump. Since most manganese ore is converted to manganese ferroalloys for use in steel production, demand is closely tied to steel's fortunes. In addition, changes in the steel making process, which are more efficient and require less manganese, point to a continued decline. As one observer puts it, "Manganese is getting hit with a double whammy."

Brass

Considering the weakening price of copper and the relative strength of the dollar, George A. Milne, purchasing divisional manager for Delta Faucet, Indianapolis, believes the price of brass will drop as much as three cents a pound—to 43¢/lb—in the third quarter of this year, producing a buyers' market.

However, he warns, with a continued upsurge in housing construction, this buyers' market could deteriorate in the fourth quarter.

Molybdenum

The price of molybdenum has been falling steadily in recent years dropping from an average of \$9.70/lb of concentrate in 1980 to an average of \$3.04/lb in 1984—ranging from \$2.70 to \$3.05/lb in the fourth quarter of last year. This drop is credited

to rising producer inventories.

During the first quarter of this year, the price rose to \$4.50/lb before settling down to its present range of \$3.35 to \$3.50/lb—a rise attributed to reports of potential mine shutdowns in the U.S.

Iron and steel production accounts for about 75% of molybdenum consumed in this country. With worldwide supplies adequate and a continued slowdown in U.S. and world steel production, prices should remain soft until there is a pickup in the steel industry.

Cobalt

With world production capacity at about 85 million pounds annually and world consumption in 1984 at around 45 million pounds, there is an ample supply of cobalt.

Of the 85 million pounds capacity, Zaire accounts for 37 million and Zambia accounts for 11 million pounds—56% of world production. The U.S.S.R. is the next largest producer with a capacity of 10 million pounds. U.S. mine production of cobalt stopped in 1971.

Zaire and Zambia set the market price, now at \$11.70/lb for electrolytic cobalt. To some degree they have brought some stability to what has been an especially volatile market. In 1980, for example, cobalt sold for an average of \$25.00/lb. In 1978, it was only \$11.45/lb.

Chromium

As stainless steel goes, so goes the market for chromium. The production of stainless steel and heat-resisting steel accounts for about 81% of chromium consumption in the U.S., one of the world's leading consumers of the metal.

Chromium is contained in chromite and ferrochromium which comes to the U.S. for refining from the Republic of South Africa and from Zimbabwe.

The price has remained stable with South African high-iron chromite selling in the range of \$42-\$52/ton and chromium metal selling at about \$4/lb. The Bureau of Mines expects demand for primary chromium to increase at an average annual rate of 6.5% through 1990. **PW**

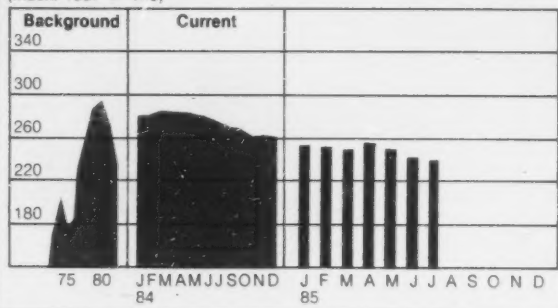
BUSINESS DATATRAK

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Raw material price barometer

Latest month 240.7
Month before 242.9
Year ago 280.1

(Index: 1967 = 100)



Latest spot market prices

FERROUS METALS

	Latest price	Previous month	Year ago
Pig iron, basic, valley, gross ton	213.00	213.00	213.00
Pig iron, Bessemer, Pitts., gross ton	213.00	213.00	213.00
Steel, billets, Pitts., net ton	367.00	367.00	367.00
Steel, structural shapes, Pitts., cwt.	23.90	23.90	23.90
Steel, structural shapes, Chi., cwt.	23.90	23.90	23.90
Steel, structural shapes, Los Angeles, cwt.	23.90	23.90	23.90
Steel, bars, divd. Phila., cwt., merchant quality	23.95	23.95	23.95
Steel, bars, Pitts., cwt.	23.95	23.95	23.95
Steel, bars, C.R., Pitts., cwt.	29.25	29.25	29.25
Steel, plates, Pitts., cwt.	23.25	23.25	23.25
Steel, plates, H.R., Pitts., cwt.	23.25	23.25	23.25
Steel, sheets, C.R., Detroit, cwt.	27.10	27.10	27.10
Steel, strip, C.R., Chi., cwt.	35.30	35.30	35.30
Steel, basic wire, Pitts., cwt.	23.65	23.65	23.65

NONFERROUS METALS

Aluminum, ingot, lb. (market place)	0.475	0.463	0.553
Antimony, in alloy, lb.	2.00	2.00	2.00
Beryllium-copper, cost ingot, lb.	5.35	5.35	5.20
Brass, red, 85%, [sheet], lb.	1.31	1.29	1.23
Brass, yellow, [sheet], lb.	1.26	1.24	1.18
Cadmium, lot lots, lb.	1.00	1.00	1.55
Copper, electrolytic, wire bars, refd., lb.	0.68	0.66	0.62
Copper sheet, over 24 in., lb.	1.40	1.38	1.32
Lead, common, N.Y., lb.	0.190	0.185	0.280
Magnesium, pig ingot, [99.8%], lb.	1.48	1.48	1.48
Mercury, 20 fl. lots, N.Y., fl.	317.00	308.00	295.00
Molybdenum Climax Oxide/bags, lb.	4.65	4.65	4.65
Nickel, electrolytic, producer, lb.	3.20	3.20	3.20
Platinum, producer, oz.	475.00	475.00	475.00
Silver, N.Y., oz.	6.22	6.05	7.67
Tin, Straights, N.Y., lb.	6.48	6.29	6.28
Zinc, Prime West, East St. Louis, lb.	0.41	0.44	0.48
Zinc, die casting alloy, No. 3, lb.	0.485	0.505	0.555

PAPER

Uncoated book #3 offset, ton	850.00	850.00	850.00
Watermarked bond, ton	985.00	985.00	985.00
Gummed sealing tape, carton	16.22	16.38	16.02
Boxboard, mach. clay ctd. recycled sheets 80 bright, 016, ton	495.00	495.00	495.00
Wrapping paper, std. distributor cost, kraft, basis wt. 50 lb., roll	28.00	28.00	28.00
Kraft linerboard, 42 lb., unbleached, ton	290.00	290.00	350.00

TEXTILES

Burlap, 10 oz., 40", N.Y., yd.	0.292	0.296	0.339
Cotton drill, 1.85, 59", 68x49, N.Y., yd.	1.04	1.04	1.04
Cotton middling, 1", N.Y., lb.	0.566	0.595	0.622
Printcloth, 48" 80x80, N.Y., spot yd.	0.60	0.60	0.76
Army duck, 37", 13 oz., yd.	1.70	1.70	1.91
Blended printcloth, 64", 78x54, yd.	0.630	0.680	0.770
20s combed yarns	1.95	1.95	2.10
Wool tops, N.Y., lb.	3.60	3.60	3.60

CHEMICALS

	Latest price	Previous month	Year ago
Acrylonitrile, tanks, lb.	0.455	0.455	0.455
Ammonia, anhydrous, fertilizer, wholesale, tanks, ton	210.00	210.00	210.00
Benzene, petroleum, tanks, Houston, gal.	1.47	1.47	1.28
Caustic soda, 76% solid, drums, carlots, cwt.	26.00	26.00	26.00
Cresylic acid [over 25%], tanks, lb.	0.58	0.58	0.58
Formaldehyde, USP, 37% [12% to 15% meth.], tanks, lb.	0.106	0.106	0.106
Glycerine, synthetic, tanks, lb.	0.91	0.91	0.81
Methanol, syn., tanks, 4,000 gals., f.o.b. Gulf Coast plants	0.52	0.52	0.54
Naphthalene, crude, tanks, lb.	0.22	0.22	0.22
Phthalic anhydride, tanks, lb.	0.270	0.270	0.305
Polyethylene resin, low density liner film grade (market price), lb.	0.280	0.280	0.410
Polypropylene, homopolymer grade (market price), lb.	0.350	0.330	0.400
Polystyrene, general purpose grade (market price) lb.	0.360	0.350	0.390
Polyvinyl chloride, pipe grade (market price), lb.	270	290	285
Soda ash, 58%, light carlots, cwt.	6.15	6.15	6.15
Styrene monomer, 99.6%, tanks, lb.	0.30	0.30	0.35
Sulphur, crude, ex-terminal, Tampa, Fla., lb.	157.50	157.50	140.00
Sulphuric acid, 66%, commercial, tanks, ton	56.85	56.85	56.85
Titanium dioxide, anatase, reg., carlots lb.	0.69	0.69	0.69
Xylene tanks, gal.	1.36	1.36	1.33

BUILDING MATERIALS

Lumber, 2x4 fir, mbf, cl	327.75	326.55	307.55
Lumber, 2x2, pine, mbf, cl	304.15	315.75	301.65
Plywood, plyform, 3/4", msf, cl	581.50	578.60	567.70
Plywood, 3/4", msf, cl	383.60	381.60	364.05
Cement, bulk, ton, tl	65.44	64.94	63.75
Sand, ton, cl	6.32	6.25	6.07
Ready-mix concrete, 3,000 psi/cu yd., 15 cu. yd.	47.99	47.60	46.73
Crushed stone, 1 1/2", ton, cl	7.75	7.65	7.53
Concrete blocks, sand/gravel, 8"x8"x16", ea., tl	0.81	0.81	0.77
Gypsum sheathing, 1/2"x1"x8", msf, tl	202.29	211.94	204.57
Brick, common, per thousand, tl	183.70	181.55	173.08
Asphalt paving, AC-20	176.36	175.36	168.86
Concrete sewer pipe, 12", prem. joint, per foot, cl	7.21	7.15	7.04

FUELS

Fuel oil, No. 6 or Bunker C, Gulf., bbl	21.25	21.50	26.00
Fuel oil, No. 6 or Bunker C, N.Y., barge, bbl., reseller	24.75	25.75	30.50
Gasoline, 91 oct., reg., Los Angeles, rack, gal.	0.740	0.750	0.730
Gasoline, 94 oct., reg., Chi., tank car, gal.	0.813	0.847	0.771
Heating oil, No. 2, Chi., bulk, gal.	0.685	0.695	0.785
Heating oil, No. 2, N.Y., bulk, gal.	0.720	0.740	0.773
Heavy fuel, PS 400, Los Angeles, rack, bbl.	26.50	26.50	26.50
Jet kerosene, gal.	0.728	0.690	0.760
LP-Gas, propane, Okla., tank cars, gal. [incl. discount]	0.335	0.343	0.405

SCRAP MATERIALS

Steel, No. 1, hvy., divd., Pitts., ton	77.00	72.00	82.00
Steel, No. 1, hvy., divd., Chi., ton	73.00	64.00	77.00
Copper, No. 1, East, wholesale buy, divd., lb.	0.555	0.540	0.550
Copper, No. 2, East, wholesale buy, divd., lb.	0.475	0.455	0.465
Brass, red, East, wholesale buy, divd., lb.	0.515	0.500	0.510
Brass, yellow, East, wholesale buy, divd., lb.	0.325	0.325	0.350
Alum., old sheet/cast, E., wholesale buy, divd., lb.	0.280	0.285	0.345
Alum., mixed clip, E., wholesale buy, divd., lb.	0.315	0.315	0.370
Zinc, old, East, wholesale buy, divd., lb.	0.110	0.140	0.200
Lead, clean solids, East, wholesale buy, divd., lb.	0.105	0.100	0.165
Paper, No. 1 mixed, dir., N.Y., ton	Nom.	Nom.	Nom.
Paper, old corrug. box, dir., Chi., ton	10.00	10.00	30.00
Paper, old corrug. box, dir., N.Y., ton	8.00	8.00	25.00
Osaburg cuttings, dir., f.o.b. N.Y., lb.	0.09	0.10	0.12
White wipers, No. 1, dir. buy, f.o.b. N.Y., lb.	0.20	0.21	0.37

[Sources: Metals Week, Engineering News-Record (20-city averages), Platt's Oilgram Price Service.]

Rates favor shippers today, next year

The freight rate picture is looking better and better—at least from the shippers' point of view.

Tipoff comes from Wharton Econometrics, which has pared down its estimates of advances for 1985 to 2.7%—significantly under the 3.3% boost anticipated just three months ago. And that's less than half the 6% increase projected as recently as last December.

It's pretty much the same story for next year when overall shipping bills are expected to sport only a 4.4% increase (vs. the near 5% hike seen just three months ago). Even 1987 doesn't look all that bad, with a 5% increase projected, down from the 5.2% estimate also made three months earlier.

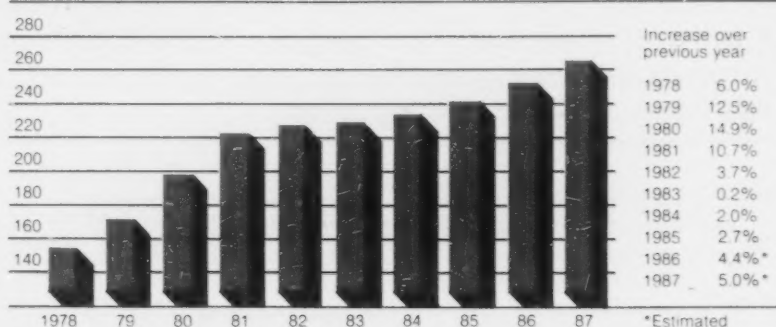
Much of the rate deceleration is attributed to slower economic growth which, in turn, has decreased both demand for shipping and overall cost pressures.

The role of imports is also singled out as a key factor in keeping the lid on rate hikes. Aside from their obvious braking effect on the economy, incoming shipments impact transportation in yet another way. Imports are only hauled once or twice in this country i.e. from the dock to the wholesaler and from there to a retail outlet. In contrast, domestic goods are moved as raw material inputs and between plants before they are ever hauled into the trade chain.

Another key finding of this exclu-

PurchasingWorld freight rate index

(1972 = 100)



sive quarterly transportation report: Rate moderation will be pretty much across the board—with individual transportation modes shaping up something along these lines...

■ **Rail:** Traffic has fallen behind its 1984 pace. For the first half of the year, ton-miles were down 3.4% from the comparable 1984 period. Even heretofore booming piggyback traffic is only about even with last year's levels. Even with some second half pickup, the year as a whole should show only a slight increase.

Rail price increases also look to be quite moderate—averaging in the 2-4% range (seasonally adjusted annual rate) in each quarter and 3% for the year. Next year's rate hikes should average out near 4.4%.

■ **Trucking:** Like rail, traffic has fallen behind its year-earlier pace—by more than 5% as of late May, ac-

cording to the American Trucking Association. Freight rates should grow only slightly faster than they did last year.

For 1985 as a whole, for example, only a 2.8% rate advance is expected. Next year, however, haulers will get more of the increases they have been waiting for, and the average price increase will accelerate to near 4.5%.

■ **Air:** Revenues grew 4.6% in 1984 while prices jumped 6.7% as carriers saw an opportunity to recoup their losses the previous year.

This year, however, looks a lot different as the economy slows and energy prices hold steady or even decline. In any event, rate hikes will average out near 3.3% (half that of 1984)—and next year's acceleration will be a modest 4.2%.

■ **Barge:** Shipping has been even more sluggish here than in other modes. Rates which dropped 4.2% last year should continue weak. All in all, look for continued overcapacity and cut-throat interindustry competition to squeeze growth and rates this year—with traffic rising only slightly and prices expected to push up only 2.5%. These freight tabs, however, should accelerate to just over 4% in 1986. **PW**

Freight cost outlook by mode

(Percent increase over previous year)



Source: Wharton Econometric Forecasts

Each quarter Wharton Econometrics Inc., the Philadelphia-based forecasting firm, prepares these exclusive transportation surveys for *PurchasingWorld*.